DOCUMENT RESUME

ED 345 877 PS 020 632

TITLE Muskox Milk, Ptarmigan Pie and Other Northern Delicacies (Kids Can Cook): Guide to Parents and Teachers.
INSTITUTION Northwest Territories Dept. of Education, Yellowknife.
REPORT NO ISBN-0-7708-1015
PUB DATE 92
NOTE 27p.; For companion volume of "Recipes and Related Activities," see PS 020 631.
PUB TYPE Guides - Non-Classroom Use (055)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Child Development; *Cooking Instruction; Early Childhood Education; *Foods Instruction; Foreign Countries; Hygiene; *Learning Activities; Metric System; *Nutrition; Safety; Young Children
IDENTIFIERS Northwest Territories

ABSTRACT

This guide for parents and teachers encourages the use of foods in children's learning activities, especially foods that are harvested in the Northwest Territories of Canada and that play a role in health maintenance. The activities also provide an opportunity for children to experience new foods. Sections in the guide discuss: (1) nutrition, especially as it relates to young children; (2) information on foods available in northern latitudes; (3) the use of metric measurements in cooking; (4) the relationship of cooking activities to children's development; (5) items needed for beginning cooking activities with children; (6) the organization of a cooking program; (7) safety and hygiene; and (8) the funding of cooking programs. The guide also includes a recipe for chocolate chip cookies and a table of baking times and temperatures for various foods. Numerous black and white line drawings illustrate the guide. (BC)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED345877

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☐ This document has been reproduced as received from the person or organization originating it.

☒ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

PS 020632

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

D. Crane

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

BEST COPY AVAILABLE

KIDS CAN COOK

A GUIDE FOR TEACHERS AND PARENTS

PREFACE

This publication was conceived at a workshop for Early Childhood Education.

It is designed to encourage the use of foods in learning activities, especially those foods which can be harvested in the Northwest Territories and which have traditionally played an important role in the maintenance of good health. In addition, the activities include an opportunity to experience new and different foods.

It is anticipated that this publication will help to provide a heightened interest in the nutritional well-being of children in a practical, relevant and interesting manner.

ISBN 0-7708-1015

ACKNOWLEDGEMENTS

Credit for the development of the first edition of this publication is due largely to the initiative of Glen Palmer and Ann Sparham, with the contributing skills of Sylvia Fulton, Lynne Hodgson, Marilyn Driver, Nancy Randall, Lynda McCallum and Joyce Whiteford.

This revised edition was prepared with the assistance of Myrna Ziola.

CONTENTS

PREFACE, 2

ACKNOWLEDGEMENTS, 3

NUTRITION and YOUNG CHILDREN, 5

building good food habits, 5

a balanced diet, 5

some basic facts about nutrition, 6

proteins, 6

carbohydrates and fats, 6, 8

vitamins, 6

mineral salts, 6

roughage, 7

good foods, 7

how our bodies use the various nutrients, 8

some northern food notes, 9

baking temperatures, 13

METRIC COOKING, 10

SUBSTITUTIONS, 14

COOKING WITH YOUNG CHILDREN, 15

physical development, 15

social and emotional development, 16

intellectual development, 17

sensory experiences, 18

GETTING STARTED, 19

ORGANIZING A COOKING PROGRAMME, 22

SAFETY and HYGIENE, 24

WHERE DOES THE MONEY COME FROM?, 25

NUTRITION and YOUNG CHILDREN

Building good food habits

The foods we like or dislike, and our eating habits, develop rapidly from the moment we are born into a particular family in a particular culture. Habits and attitudes towards food are strongly established in the early years. Therefore, this is the time to begin encouraging good eating habits.

Some ways to encourage children to eat good food are:

1. Let them help prepare the food. While a child may push aside a plate of vegetables you have prepared, he'll probably be quite excited about eating them if he's had something to do with buying, preparing and serving them himself.
2. Don't bribe children with sweet things. (e.g. If you finish your meat you can have a candy bar.) This places an unnecessary importance on the candy bar.
3. A piece of fruit, a slice of cheese or a handful of raisins can be used as a more nutritious treat than candy or chocolate.
4. Make meal a happy time. The meal time environment is important and makes a lasting impression on a child, so keep it as free from tension and frustration as possible.

A balanced diet

In Canada most people think of eating three meals a day — Breakfast, Lunch and Dinner. This fits in with the pattern of most peoples' lives today — getting up after a night's rest and going to work or school, having a break in the middle of the day, and finishing work late in the afternoon.

This has not always been the pattern of living in the N.W.T. However, where it is becoming so — where northern people are now working 9 to 5 jobs, and where children are going to school, the provision of three meals a day is convenient. Certainly, the young child needs something to eat before going to school in the morning. Generally speaking **what** we eat is more important than **when** we eat. As long as our bodies get the foods they need, it doesn't really matter whether we have 2 meals a day or 3 or 5.

Think of a table with four legs, one at each corner. If you place a finger on any corner nothing happens to upset the balance of the table. Now just imagine that table with one of its legs completely removed and then place your finger on that corner and see what happens. The table tips over — it is unbalanced.

We can compare a well-balanced diet with a well-balanced table. If a person has the correct amount of the right kinds of foods daily that person will be eating a well-balanced diet and will have good health and a body which will function in the way it was intended.

Some basic facts about nutrition

1. Nutrition means the study of the food we eat and how the body uses that food.
2. Food is made up of different materials called nutrients and every nutrient is important for some bodily function (e.g. the nutrient called protein, found in milk, is necessary for physical growth in children). Therefore, food must be eaten regularly, in sufficient amounts and variety, if the body is to continue to grow, be healthy and have energy.
3. Everybody needs the same nutrients, but the amounts may differ. (e.g. An active athlete needs more of the nutrient called carbohydrate than a baby, because the athlete uses more energy).
4. The ways foods are handled affects the amounts of nutrients in them as well as the appearance, taste, safety and cleanliness of those foods. Vegetables boiled in large quantities of water for a long time will lose Vitamin C because Vitamin C dissolves in water; they will also lose shape, become discoloured, and altered in taste and texture. Cooked foods which are kept at warm, room temperature for many hours can be harmful and dangerous because germs in the food grow very quickly under these conditions.

The nutrients in food affect:

1. the growth and development of the body.
2. the amount of energy the body has.
3. the regulation and maintenance of the body's functions — e.g. heart beat, resistance to colds.
4. the ability of the body to use nutrients.

These nutrients fall into four catagories:

Proteins

These enable a body to grow and, in the adult, help to repair body tissues which are constantly wearing out. There are 2 kinds of proteins: **Complete** proteins which are found in milk, eggs, lean meat muscle, fish, poultry, liver, kidney, heart. **Incomplete** proteins which are found in peas, beans, nuts, lentils and whole grain cereals. Use these with even a small amount of complete protein such as milk and the body will make use of them as complete protein. A combination of incomplete protein foods can supply complete protein. However, the proper combination is vital.

A table is included in the back of the book to show you the necessary combinations.

So often children leave their meals unfinished. If the unfinished portion is vital to making up the complete protein, then the child is not getting any complete protein from that meal. It is very important, in the early years especially, that the child gets enough foods which provide proteins for growth. The physical damage which results from inadequate protein over a prolonged period of time is very serious. Even if later on the child receives enough protein, it may be too late to repair the damage; it's also likely that the child's intellectual growth will be stunted. In very poor countries, this type of malnutrition is very common.

Carbohydrates and Fats

These are the sources of energy and heat for the body. There are different kinds of carbohydrates and fats. If a healthy person takes into the body more carbohydrates and fats than it can use, then it is very likely the body will put on weight in the form of excess fat. It is important that a person doesn't fill up with all kinds of foods made from sugars just because they taste good and are easy to get — e.g. candy, pop, cakes. Check that the other key nutrients are also present.

Vitamins

There are many vitamins, each having a special function. In general, vitamins protect the body against deficiency diseases — e.g. scurvy, beriberi and night blindness.

Mineral Salts

These are necessary to help the body maintain a good supply of healthy blood, strong bones and teeth, and also help the body use other nutrients to maintain all bodily functions.

Roughage
Also necessary are water and cellulose.

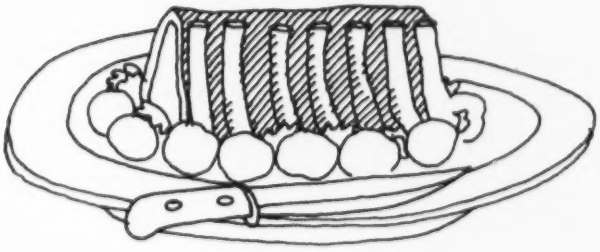
Cellulose is part of the structure of fruits and vegetables. It is important because it has a laxative effect and helps overcome constipation. These foods are very good to eat raw whenever it's possible to do so.

For normal healthy living, the body needs sufficient supply of 40 different nutrients daily. Fortunately for us, we don't have to remember them all.

In 1975 a revised Dietary Standard for Canada* was published. It is emphasized that a variety of foods be eaten to ensure the maintainance of health.

It is better to get the nutrients your body needs from foods rather than from vitamin pills and supplements. People do carry on from day to day even though they may be getting poorly balanced meals. However, the body will eventually lack vigour and resistance to disease if this continues.

* **Dietary Standard for Canada,** published by Department of National Health and Welfare.



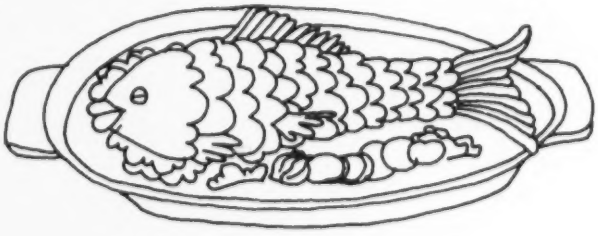
What are good foods
Traditionally people in the N.W.T. got their food by hunting, trapping and fishing. Many also used wild berries, roots, herbs and seaweed. Local needs usually could be filled by local resources.

As long as they caught enough animals and ate parts of all the animal, they remained in good bodily health. Now, however, some things have changed and not everyone hunts or traps anymore. Even when there is country food, it may not be in large enough quantity and some food must be bought from the store.

This food is brought in from the south by ship, plane or truck. There are many different foods and it is important to know how to choose foods that are best for the body. The foods that cost the most are not always the foods you need to buy to keep your body healthy.

How can a person know what is good to eat? The following guide shows you what foods contain the various nutrients. Canada's Food Guide is also very helpful for amounts. Use these two guides for planning and checking your daily menu.

The World Health and Food and Agriculture Organizations are internationally important bodies and provide nutritional information on which standards are based.



Nutrient	Use in the Body	Rich Sources
Protein	helps to promote growth and constant replacement of body tissue	— milk, cheese, eggs, lean meat muscle, poultry, fish (raw or cooked).
Vitamin A	helps promote normal vision	— liver, eggs, milk, margarine, butter, cream cheese (not cottage or skim), dried apricots, yellow peaches, watermelon, yellow vegetables (e.g. sweet potatoes, carrots), leafy greens (e.g. spinach, broccoli), blubber.
Vitamin B^1 (Thiamine)	helps promote good appetite, good digestion and steady nerves	— enriched and whole grain flours, bread and cereal (rolled oats), green lima beans, wheat germ, potatoes, liver, kidney, heart, lean pork.
Vitamin B^2 (Riboflavin)	helps promote healthy skin, helps utilize the carbohydrate in the food	— milk (dried or evaporated is fine), liver, kidney, heart, eggs, **fortified** ready-to-eat cereals (read the label), spinach, mushrooms, whole grain or enriched white bread. **Milk is a very important source.**
Niacin	helps normal growth and development	— meat, fish, birds, enriched cereals, milk, cheese, eggs, tomatoes, peas, peanut butter.
Vitamin C (Ascorbic Acid)	helps to make healthy gums and blood vessels, helps in healing wounds and overcoming feverish infections like colds	— oranges, grapefruit, vitaminized apple juice tomato juice, cabbage, tomatoes, fresh raspberries, strawberries, sprouting seeds, wild greens (e.g. sprouting leaves of the willow), northern berries and seaweed.
Vitamin D	helps to promote normal development of teeth and bones	— fatty fish such as sardines, salmon, char, tuna and herring, egg yolk, evaporated milk or skim milk powder fortified with Vitamin D. Exposure of the skin to sunshine can be beneficial.
Calcium	helps to make strong bones and teeth	— milk is especially good and so is cheese; when using canned fish, mash in the softened bones; also, chew the soft ends of animal bones.
Iron	helps to make healthy red blood cells which prevent anemia	— liver, kidney, heart, meat (blood from raw meat is particularly good), poultry, eggs, enriched flour, and bread or bannock, whole grain cereals, enriched cereals, peas, beans, lentils, greens, molasses, dried fruits.
Carbohydrates	supply calories, i.e. energy or heat, to the body	starches and sugars contain carbohydrates. Syrup, jam, jelly, marmalade and candies are mainly sugar with a nice flavour. Honey and brown sugar are not much better than white sugar. Sweet foods in large amounts are not essential to the body so use them sparingly. It is better to use the natural sugars in fruits, vegetables and milk whenever possible. Starches are found in flours and cereals, rice and macaroni but since the body also gets incomplete protein from these foods, choose from them rather than sugar foods.
Fats	used mainly for energy	— they may be vegetable or animal in origin.

SOME NORTHERN FOOD NOTES

Milk

In the North some people may find it uncomfortable to drink milk. If this is the case, don't insist; encourage the use of smaller amounts more often, gradually increasing amounts as tolerance builds up.

In any case, milk can be used in food preparations to provide important food nutrients. Powdered or evaporated canned milk are good foods.

Land Animals, Fish and Birds

Use whatever country foods are available — caribou, moose, beaver, char, ducks, ptarmigan, etc.

Eat liver occasionally.

Eggs, cheese, fish, birds, beans or peas may be used instead of meat.

Canned fish e.g. sardines, mackerel, tuna and salmon can also be used.

Note: if you eat uncooked fish, it is safer to use fish which has been frozen for one week at -18°C or for 48 hours at -30°C.

Fruits and Vegetables

Canned or frozen orange juice, vitaminized apple juice and tomato juice are available in most communities.

In summer, berries can be found in many areas. Pick them, eat them and, if it is possible, gather extra and freeze them for future winter use.

A variety of yellow and green vegetables is available in most communities, also fruits and vegetables — fresh, canned, dried, frozen or, possibly, freeze-dried.

Look for and use sources such as seaweed, and naturally growing plants and roots in your community.

Grow vegetables in the classroom, home and, where possible, outdoor gardens.

Cereals

Bread, bannock, and margarine and other fats are good foods.

Whole grains are important. Fortified and enriched cereals and flours are those which have Thiamine, Riboflavin, Niacin and Iron added.

Fortified margarine has added vitamins.

Special attention must be given to the amounts of Vitamin D needed by growing infants, children and expectant mothers. Check with a Public Health Nurse and read the labels when you shop.

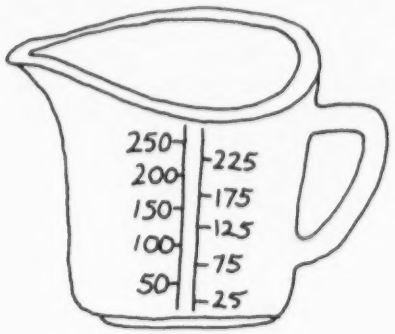
In the recipes in this book, we have used country food as much as possible. Otherwise we have generally used simple ingredients that should be available in most communities. If any ingredient isn't available, try substituting something else.

METRIC COOKING

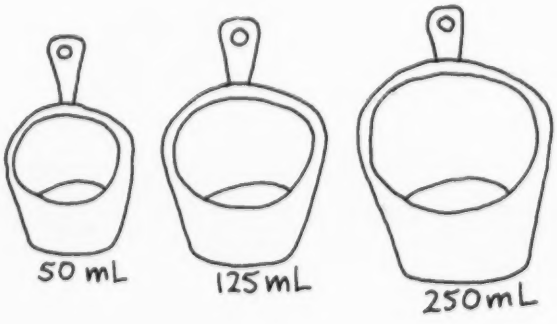
All the recipes in this book are metric.

Here are some tips that will help you use our recipes and will also show you how to convert your own recipes to metric.

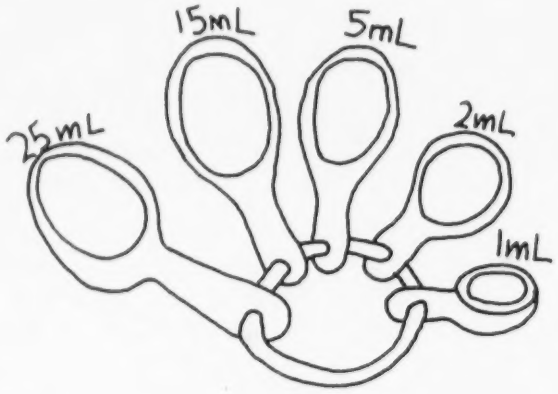
Liquid Measures
Measurements of liquids should be read at eye level. The 250 mL line is a little below the rim so that the liquid will not spill over. The 250 mL measure is graduated in 25 mL divisions. For larger amounts of liquid there is a 500 mL and a 1,000 mL measure, graduated in 50 mL.



Dry Measures
The set consists of three measures, each designed to have the given capacity when level full. The dry measure set includes a 250 mL, 125 mL and a 50 mL measure.



Small Liquid and Dry Measures
The set includes five measures: 1 mL, 2 mL, 5 mL, 15 mL and a 25 mL (a typical coffee measure).



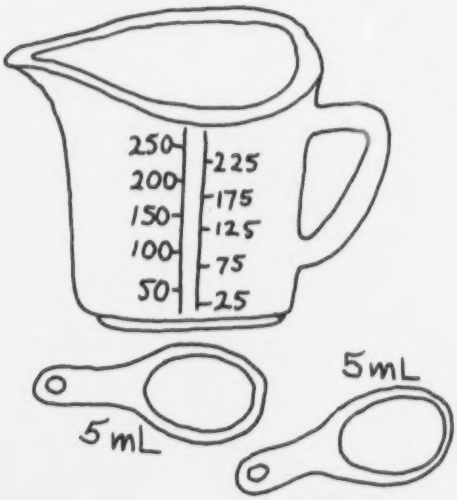
1 mL replaces ¼ teaspoon
2 mL replaces ½ teaspoon
5 mL replaces 1 teaspoon
15 mL replaces 1 tablespoon

If you cannot get metric equipment, or the children find it difficult to read finely graduated measures, make your own measuring equipment.

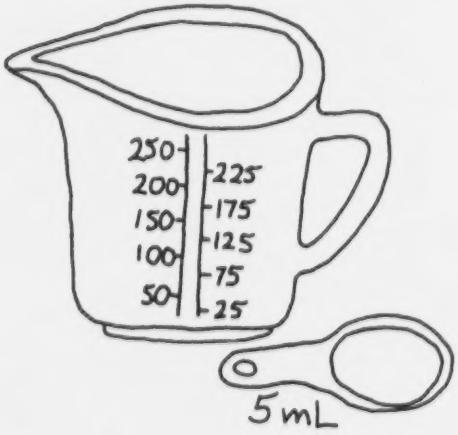
Things to remember when adapting old recipes to metric measurement.

1. Fats like butter, margarine, lard, and white or brown sugar will melt and become liquid during the cooking process. So, if you increase the fat content, decrease the sugar, or vice versa, and you will not significantly alter the total amounts of liquid.

2. a) when you use baking powder as a raising agent (but no eggs) e.g. for quickbreads, the proportion of flour to baking powder would be 25 to 1, e.g. 250 mL flour to 10 mL baking powder.

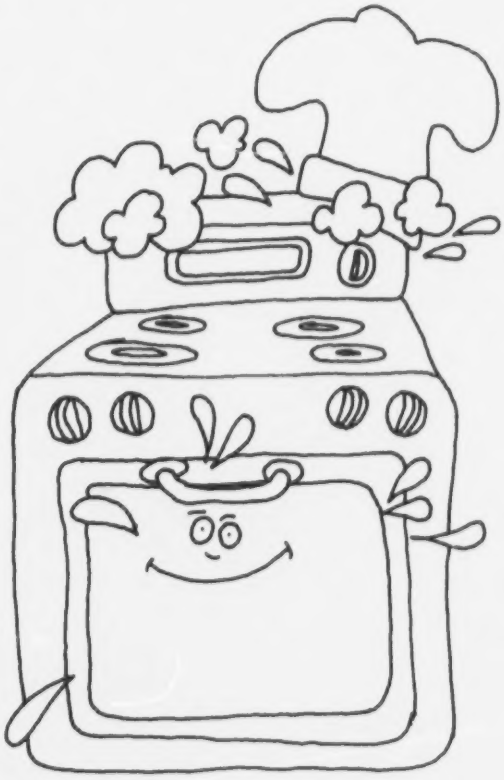


b) When you use baking powder for **cake** making (with eggs) the proportion of flour to baking powder is 50 to 1. e.g. 500 mL flour to 10 mL baking powder, OR, 250 mL flour to 5 mL baking powder.



Always remember that conversion will slightly increase the quantities you use, as you round off the measurements to the metric system. Since the greatest number of recipes we are using are such that "home measures" — e.g. handfuls — can be used in the first experimental approaches, it is not anticipated that there should be great difficulty.

The information that follows was issued by the Metric Commission of Canada.



CONVERSION OF OLD RECIPES

Conversion to metric units involves a 5% increase in amounts but certain cooking items such as eggs, and possibly gelatine and cooking chocolate will not increase. Further, the 1/4, 3/4, 1/3 and 2/3 measures of 250 mL do not convert to easy amounts. These require rounding up or down. This necessitates testing all metric recipes.

CHOCOLATE CHIP COOKIES

Old Recipe (Imperial)	Actual Metric Conversion	Revised Metric Recipe
1¾ cups all purpose flour	437.5 mL*	425 mL
½ teaspoon baking soda	2.5 mL*	2 mL
½ teaspoon salt	2.5 mL*	2 mL
1 cup butter or margarine	250.0 mL	225 mL
⅔ cup granulated sugar	167.0 mL*	175 mL
⅔ cup lightly packed brown sugar	167.0 mL*	175 mL
1 egg	1	1
1 teaspoon vanilla	1 mL	5 mL
1 package (6 ounces) chocolate chips	250.0 mL	250 mL
½ cup chopped nuts	125.0 mL	125 mL

Preheat oven to 190°C.

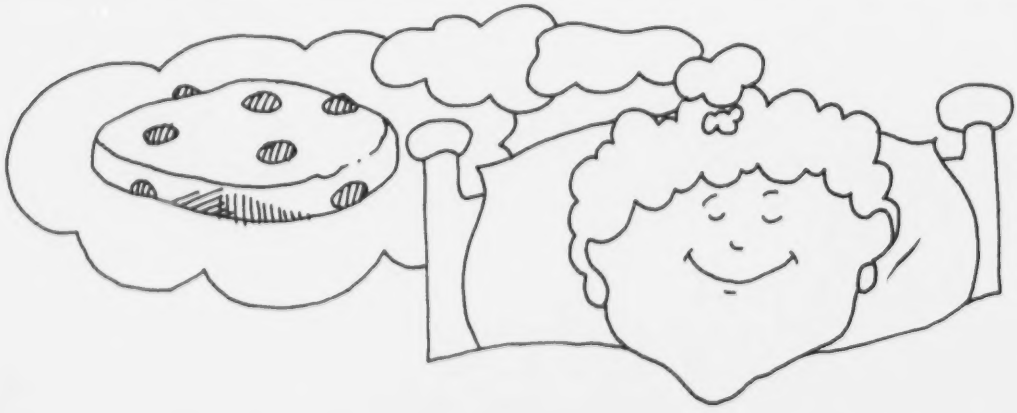
Lightly grease a baking sheet.

Sift together flour, baking soda and salt. Cream butter and sugars together. Beat in egg and vanilla until light and fluffy. Stir in dry ingredients with chocolate chips and nuts. Drop batter from a teaspoon about 5 cm apart on prepared baking sheet.

Bake in preheated 190°C oven for 8 to 10 minutes, or until golden brown.

Makes 4 to 5 dozen.

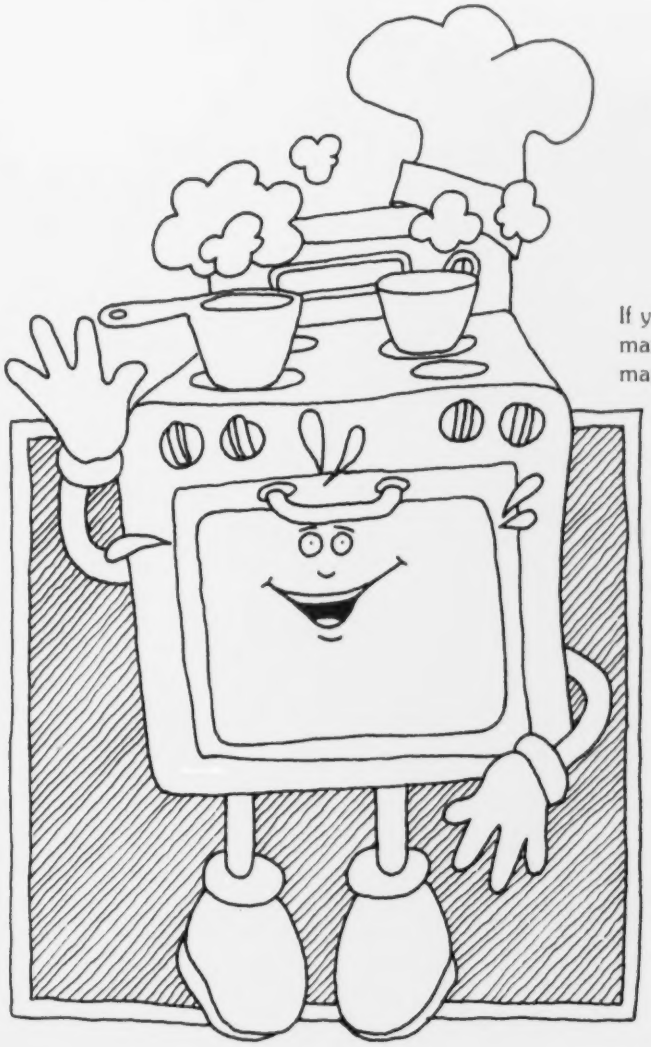
* Amounts requiring rounding to whole numbers or to multiples of 25. Testing showed sugar amounts could be increased if shortening was decreased.



BAKING TEMPERATURES

Type of Product	Oven Temperature (°C)	Time (minutes)
BREADS, etc.		
Cream puffs, popovers	190	60
Muffins	200-220	20 to 25
Quick breads	180-190	60 to 75
Tea Biscuits	220-230	10 to 15
Yeast Bread	200	30 to 40
Yeast Rolls, plain	200	20 to 25
sweet	190	20 to 30
CAKES WITH FAT		
Cup	180-190	15 to 25
Layer	180-190	20 to 35
Square, rectangle	180	45 to 60
CAKES WITHOUT FAT		
Angel and sponge (tube pan)	170-180	50 to 60
COOKIES		
Drop	180-200	8 to 15
Rolled	190	8 to 10
EGG, MEAT, MILK AND CHEESE DISHES		
Cheese souffle, custards (baked in a pan of hot water	180	30 to 60
Macaroni and cheese	180	25 to 30
Meat Loaf	180	60 to 90
Meat Pie	200	25 to 30
Rice Pudding (raw rice)	150	120 to 180
Scalloped Potatoes	180	60
PASTRY		
One crust pie (unbaked shell)	200-220	30 to 40
Meringue on cooked filling in prebaked shell	180 or 220	12 to 15 or 4 to 4½
Shell only	230	10 to 12
Two crust pies with uncooked filling	200-220	45 to 55
Two crust pies with cooked filling	220-230	30 to 45

When baking in ovenproof glassware, reduce temperature 10°C. For example, when using a glass pie pan, bake at 220°C instead of 230°C given in chart for pie shell.



If your stove is an older model with temperatures marked in Fahrenheit only, this conversion chart may be useful.

Thermostat Setting of 0°C	Thermostat Setting of 0°F
140	275
150	300
160	325
180	350
190	375
200	400
220	425
230	450

SUBSTITUTIONS

1 fresh egg = 15 mL dried egg + 45 mL warm water.

250 mL sour milk = 15 mL vinegar + enough milk to make 250 mL.

Chilled evaporated milk can be used for cream.

Margarine can be used for butter.

Dried vegetables, parsley, etc. can be used instead of fresh.

Use the drippings from cooked bacon, chicken or beef to give flavour to stews and soups.

In cake making, substitute not more than half the amount of sugar with honey or molasses and use slightly less liquid.

COOKING WITH YOUNG CHILDREN

Cooking with children is a practical way of encouraging good eating habits, a way far more likely to have success than just talking about nutrition. Children learn by doing things and by discovering things for themselves. Cooking offers the opportunity for children to engage in numerous valuable learning experiences.

Physical Development

Development of the small muscles of the body is essential for carrying out many everyday tasks. For example, if a child cannot write very well, it is likely that the small muscles in his hands have not yet developed enough for him to be able to control a pencil.

Being able to co-ordinate his eye and hand movements is also very important. For example, if a baby feeding himself puts a spoonful of food to his nose rather than in his mouth it's probably because he's not yet able to put his hand where his eyes tell him to put it.

This type of physical development can be helped through such cooking activities as:

Mixing

Stirring

Beating (with an egg beater)

Tearing (tearing lettuce, opening packets, etc.)

Cutting (with various utensils, into various shapes)

Grinding (e.g. with a meat grinder or an ice cream machine)

Grating (fresh vegetables, cheese, etc.)

Peeling (with fingers and with a vegetable peeler or knife)

Shaking (e.g. shaking milk to make butter, shaking a bottle to mix the contents)

Wrapping (e.g. tin foil around potatoes or meat)

Dipping (e.g. fish in batter)

Rolling (e.g. cookie dough)

Slicing (with different kinds of knives)

Spreading (e.g. butter on bread, frosting on a cake)

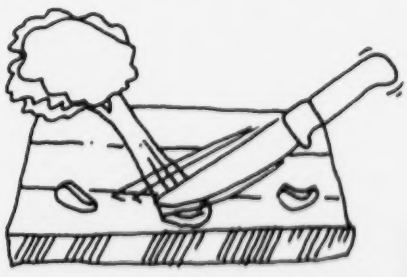
Scrubbing (e.g. potatoes. Also scrubbing hands before preparing food, scrubbing tables before serving food on them, washing dishes)

Squeezing (e.g. squeezing an orange to make orange juice, squeezing a tube or plastic bottle to get the contents out)

Breaking (vegetables, eggs, etc.)

Sifting

Crumbling



Social and Emotional Development

As well as growing physically and intellectually, a child grows socially. From a baby who depends on adults for everything, he quickly grows into an independent person interacting with other persons. How well he interacts with others depends a lot on how well his basic needs are being satisfied.

A child needs:

- to be loved and to feel secure.
- to be properly clothed and fed.
- to be able to do things for himself. There is a great striving for independence in the young child.
- to feel good about himself.
- to have others recognize and praise his efforts.

If these needs are satisfied, then the child will likely work and play well with other children.

While nothing can replace the love and security a child gets from his own family, cooking and eating together at school gives lots of opportunity for making children feel happy and secure and for enhancing their social development.

For example:

- planning what to cook, what ingredients to buy, etc.
- dividing the jobs up amongst those involved. — e.g. who'll do the shopping, who'll dice the potatoes, who'll serve the food, etc.
- taking turns and waiting for one's turn.
- sharing and working together.
- providing opportunity for releasing tensions — e.g. beating, grinding, mixing can be good ways of getting rid of extra energy.
- singing, story telling and games (about the food you're preparing, or just singing while you work).
- encouraging independence and a feeling of self-satisfaction (the thrill of eating your very own soup when you're 5 years old).
- developing awareness of one's own uniqueness and an acceptance of others' differences. e.g. children will discover that not everyone likes the same foods, that they have their own likes and dislikes. Even so, they may enjoy preparing a food others like, but that they don't.
- learning about other cultures and their food customs (what the people of that culture eat, how they prepare their food, how they sit to eat, what utensils they use, etc.)
- providing lots of opportunity for community and parent involvement — e.g. parents providing food for the cooking programme, helping with the cooking, etc. The latter can provide very satisfying learning experiences for all — parents showing how food is prepared in the traditional way, and, at the same time learning with their children what nutritional substitutes can be bought at the store and different ways these can be prepared.
- Finally, there is the very special social experience of sitting together and eating the food that has been prepared. This should be a happy and satisfying moment for all concerned. Remember, accidents do happen, so there shouldn't be any harsh words over spills, or insistence on eating something not liked.

Ideas for serving food

Occasionally set up the eating area like a restaurant or coffee shop. Children can play various roles - cooks, waiters, waitresses, etc. Also, let your children write their own menus; include prices so that the experience will also involve the use of money. If it's possible in your community, let your children eat out as a class project. Discuss the choice of foods and social behavior.

Intellectual Development
Through cooking, many discoveries are made and learnings reinforced:

For example:
Comparing (this one's bigger than that, I have more than you, etc.)

Sorting

Estimating

Counting

Using money — reading prices, giving change, etc. (set up a play store in the classroom if possible)

Telling time

Measuring

Sharing

Distinguishing shapes, colours and textures

Following directions (both oral and written. Cooking provides lots of motivation for reading labels, recipes, etc. As such it is strongly recommended for slow learners/poor readers.)

Learning new concepts and words (e.g. sweet/sour, mix, pour. Also, scientific concepts such as melt, liquid/solid, hot/cold.)

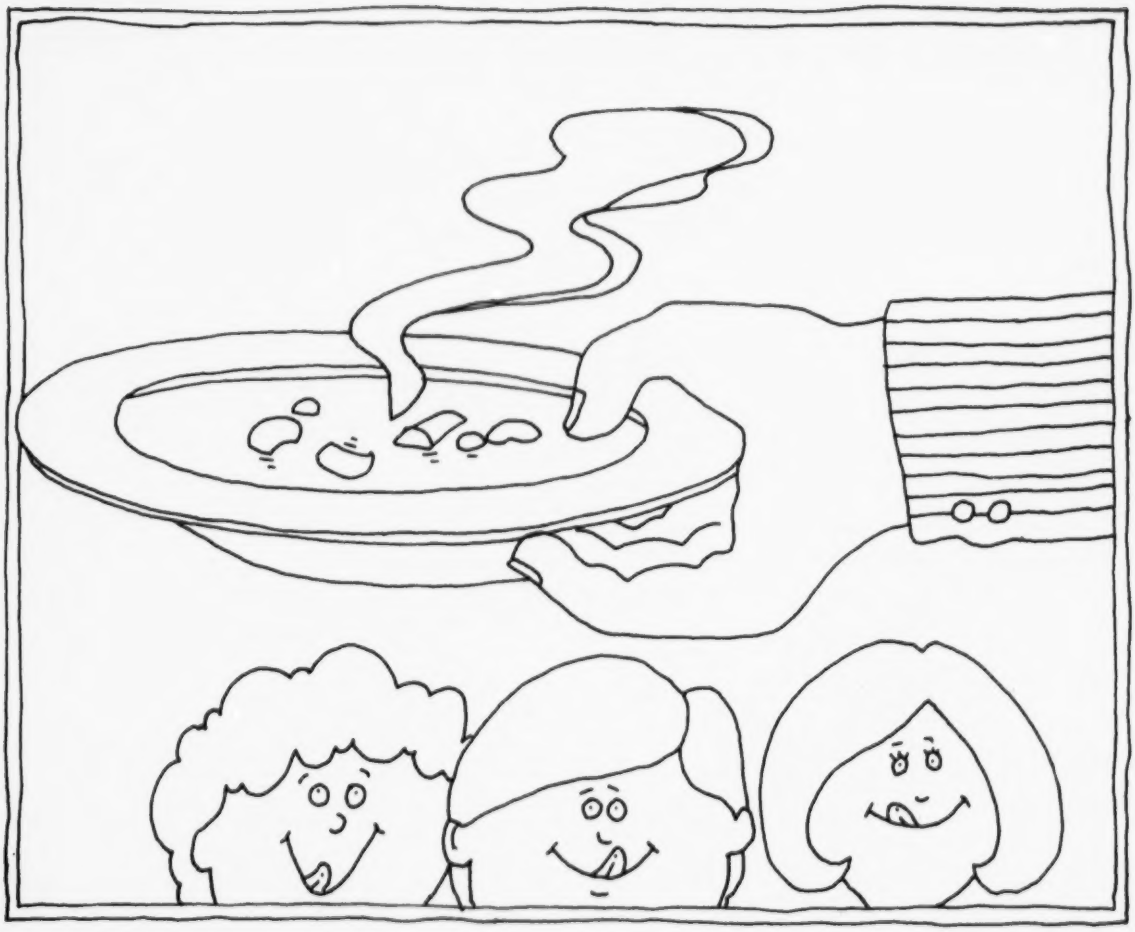
Seeing relationships between objects (e.g. the can of beans and the bean seeds you plant) Seeing cause and effect relationships.

Learning about food (where it comes from, which foods are best to eat, etc.) Don't concentrate too much on facts with the young child; rather, supply simple information if and when it's required. Food groups probably won't have much meaning before the end of primary school.

Nevertheless, children should develop an increasing awareness of the food business. The whole area of food processing might be studied in considerable detail with older children. They should be encouraged to read food labels and note the additives. The potential hazard of these should not be overlooked.

Critical evaluation of food advertising, especially T.V. commercials, should also be encouraged. How are children exploited in these?

BEST COPY AVAILABLE



Sensory experiences
How does it taste? How does it smell? Can you hear it? What does it feel like? What does it look like?

Cooking can be an exciting adventure into the world of the senses. As such, it should be used as much as possible with young children. They learn primarily through their senses, exploring their world by putting things in the mouth, handling things etc. If they are encouraged to explore this way, they will likely grow into sensitive adults, more aware of the beauty of the world around them.

In cooking, children can feel the textures of food, both with their hands and their mouths — e.g. the softness of dough, the crunchiness of an apple. They can see how food looks before and after it is cooked — e.g. they see the hard beans become soft, the liquid cake mixture become solid and rise. They also see the changes in colour that take place as food cooks — e.g. the water in the soup pot.

Of course the tastes and smells of cooking are infinite. Children should be encouraged to identify and compare smells and tastes, and to notice how they change as the food is cooked or prepared for eating.

Consider the pot of vegetable soup. What starts out as a pot of cold water ends up as a colourful and tasty dish with a variety of textures and an irresistible smell.

Nor is cooking a silent activity. Besides the enthusiastic chatter of the children, there are numerous ways food makes itself heard — if only we listen!

It sizzles and bubbles and crunches and spits; it gurgles and hisses and pops and plops. "What do you think the food is saying?" is always an interesting opener for a conversation while cooking!

GETTING STARTED

You don't need a lot of fancy equipment or a real kitchen for cooking.

You can set up a cooking area near to an electrical outlet. If you have a playhouse area, put the cooking centre near it.

Here are a few things you'll need to get started on a cooking programme:

a hot plate

a couple of pots

a couple of mixing bowls

a few knives and wooden spoons

a can opener

a cup, dish and spoon for each child

towels, preferably paper

aluminum foil/plastic wrap

a flat surface, of a height suitable to the children

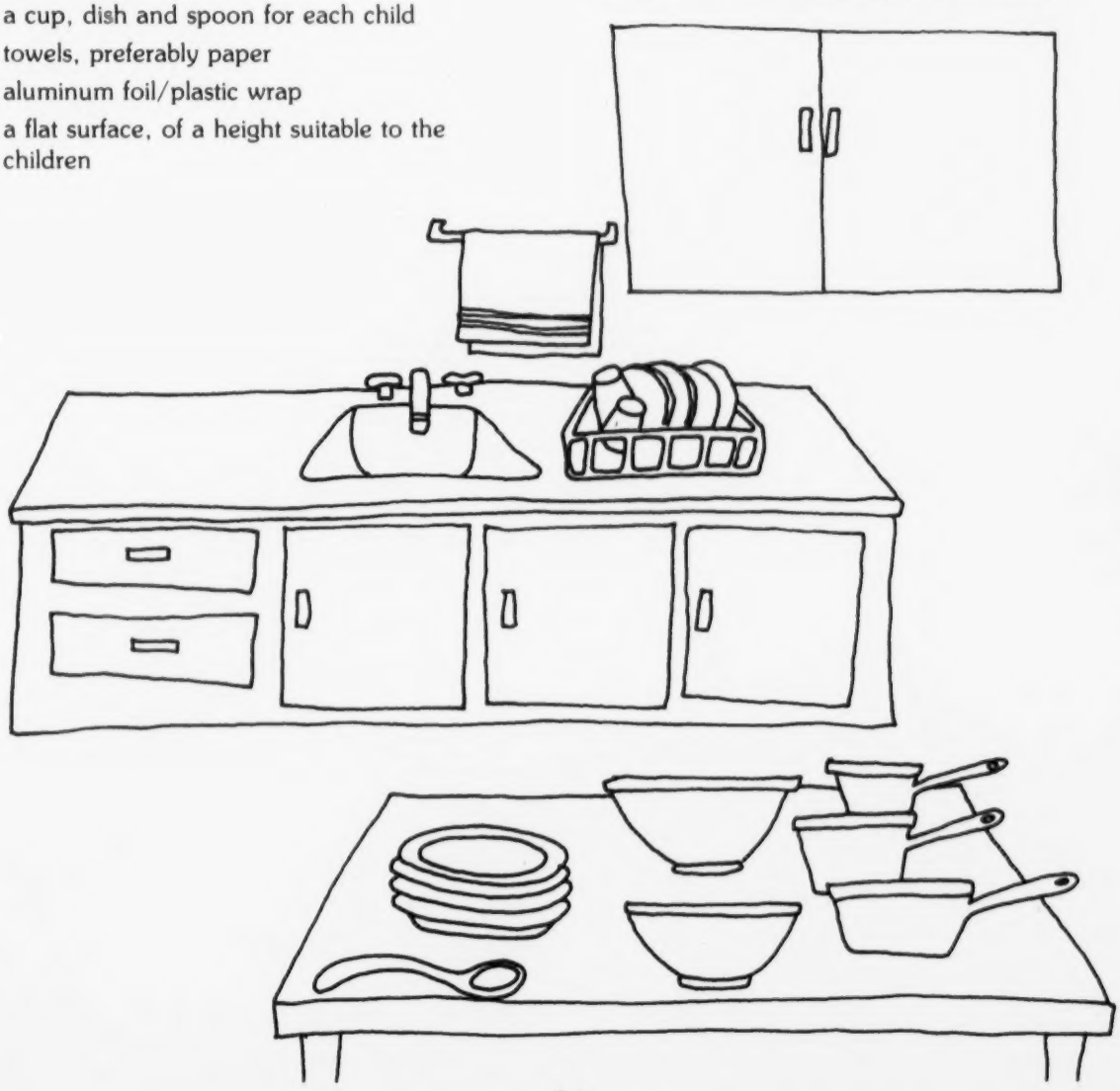
sponge/rags for wiping spills, cleaning tables

some storage space for food and utensils (decorate some cartons and stack them securely if you haven't any cupboards)

washing-up equipment (a large dish, some detergent/soap, a dishcloth, tea towels)

a source of water

Add to these by saving all kinds of metal containers, plastic containers, aluminum foil plates and any other disposable items that can be hygienically washed and recycled. As well, you can probably scrounge a lot of things from the community and its visitors.



As time goes on, you might try to add some of the following things to your basic supplies. Many can be shared by the whole school. Some may even be borrowed from people in the community:

Vegetable peeler

Meat grinder

Grater

Knives of different sizes and different cutting edges (these add interesting patterns to the food)

Potato masher

Strainer

Flour sieve

Wire whisk

Rolling pin

Cutting boards

Egg beater

Juice squeezer

Cookie cutters

Aspic cutters (great for cutting vegetables — a child will be quite excited about finding a heart-shaped piece of potato in his soup bowl)

Meat saw

Measuring cups

Measuring spoons

Variety of spoons

Spatulas

Ice cube trays

Muffin pans

Other cake and bread pans

Pie plates

Cookie sheets

Variety of pots and pans

Variety of bowls

Variety of eating dishes and utensils

Nut cracker

Hammer

Electric frying pan

Small oven (you certainly don't **need** an oven to run a cooking programme)

Refrigerator

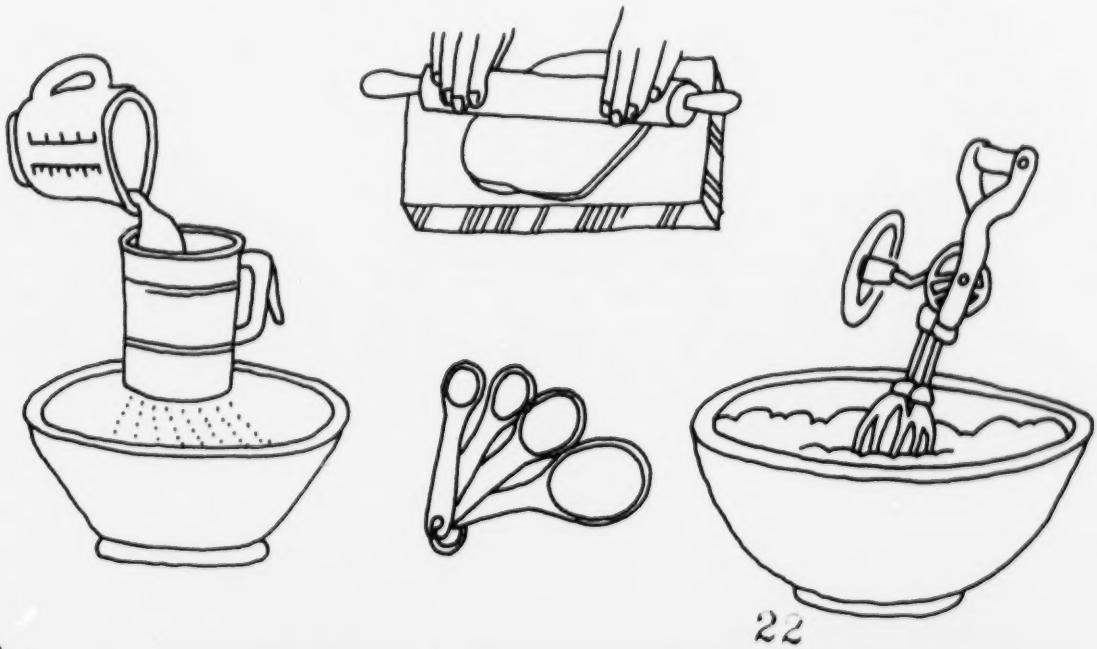
Corn popper

Ice cream freezer

Waffle iron and other such specialty items

Some coveralls or aprons for children — preferably vinyl, for easy cleaning (don't forget a place to hang these)

Generally speaking it's more beneficial to children if they use hand appliances rather than electric. By all means, show them how to use electrical appliances, but don't encourage them to depend on these.



Here are some basic foods you'll need: (the country foods available in your community should be used with these whenever possible)

Flour - white enriched, wholemeal (keep in refrigerator if possible)

Cereals - e.g. rolled oats, wheatgerm, barley, cornmeal, cream of wheat

Margarine

Brown Sugar

Honey

Molasses

Baking Powder

Salt

Powdered or canned evaporated milk (not condensed)

Egg powder

Dried fruit, nuts

Dried beans, peas, lentils

Some spices and herbs (ask people in the community if there are any grown locally. Use these as much as possible.)

Children will get a better understanding of food and where it comes from if they start from scratch. e.g. making their own peanut butter, their own noodles, their own soup, rather than buying it readymade in packets and cans. However, packaged, convenience foods may well have a place in your programme.

Often essential ingredients are not available or are very expensive; the cost may be reduced by the judicious use of pre-packaged foods. The time, facilities and skills available will also need to be carefully considered. With imagination, the use of convenience foods can be a creative experience.

Many children in the north never see store food in its natural state, so it's important to use lots of pictures and films of food growing, food being processed, and pictures of animals.

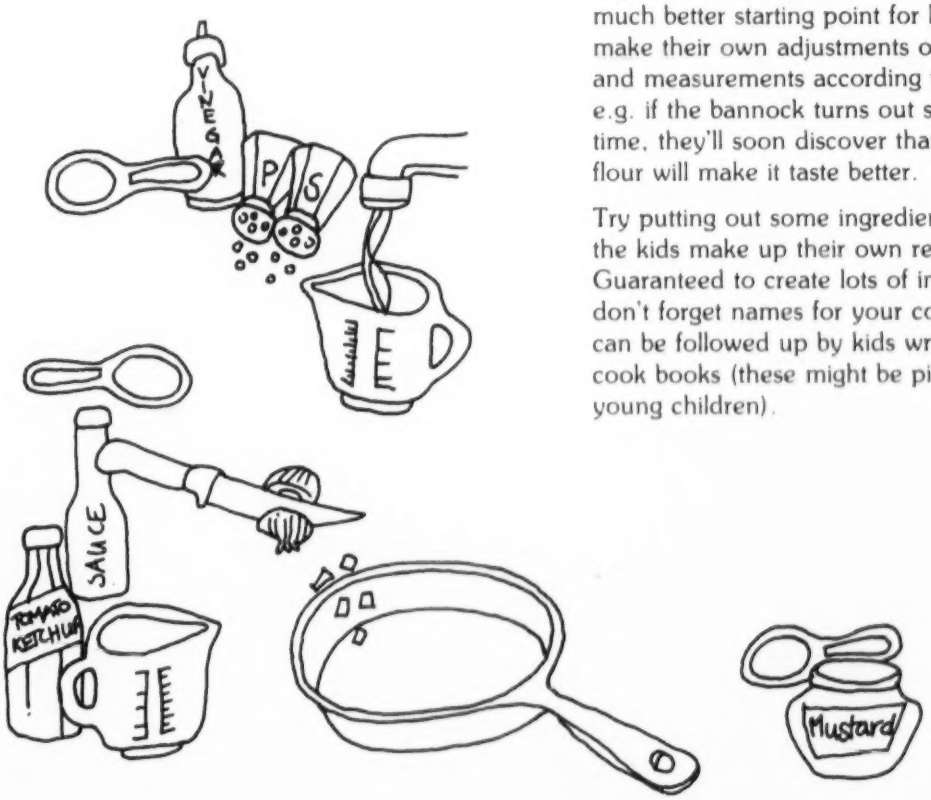
Growing things in the classroom might be considered a necessary part of a cooking programme for northern children, as it is here that they can really see the food cycle. A grow-light assists in avoiding the disappointment of straggly useless plants.

A herb garden using small pots is very easy to start and maintain. Parsley, chives and mustard might be used for a beginning.

ORGANIZING A COOKING PROGRAMME

Start with very simple projects.
Five-year-old children may need lots of practice in activities such as mixing, cutting, spreading, pouring, etc. before they are ready to prepare a whole dish. At this beginning stage, the teacher may do most of the food preparation, designating one or more areas of preparation to the children. For example, if she's preparing soup in these beginning stages, the children might just dice the vegetables or pour the noodles into the water.

It is a good idea when working with young children to put some cooking utensils in the water tank and the sand box. Children can better explore the utensils in this free-play situation and discover different ways of using them. They can then carry over their discoveries into real cooking.



Work in small groups. The number of children cooking will vary according to the number of adults in the room. However, six is probably a manageable size for one adult. A different group can cook each day. Don't force any child to cook if he doesn't want to.

Involve children as much as possible.
e.g. make up a weekly menu with them, let them do the necessary shopping, let them help with the ordering if you're ordering food from outside the community. **Above all, let them do as much of the preparation and cooking as they can.** Let them experiment and make their own discoveries. Don't get up-tight about mess; cleaning up can be fun and gives lots of opportunity for learning.

Also try not to depend too much on recipes — use them as guides only. Keeping to **exact** measurements and ingredients is unnecessary and can kill the fun of cooking. A pinch of this and a handful of that is a much better starting point for kids. They'll make their own adjustments of ingredients and measurements according to the results. e.g. if the bannock turns out soggy the first time, they'll soon discover that adding more flour will make it taste better.

Try putting out some ingredients and letting the kids make up their own recipes. Guaranteed to create lots of interest! And don't forget names for your concoctions! This can be followed up by kids writing their own cook books (these might be pictorial for very young children).

Don't make cooking a chore.
Our intention in having kids cook is not to provide cheap labour for a school lunch programme. If you are providing children in your school with a full meal each day, it may be possible to let a group of children prepare **part** of that meal. e.g. make the bannock, the noodles for the soup, or the dessert. Then, from time to time, let the whole class be involved in preparing a complete meal.

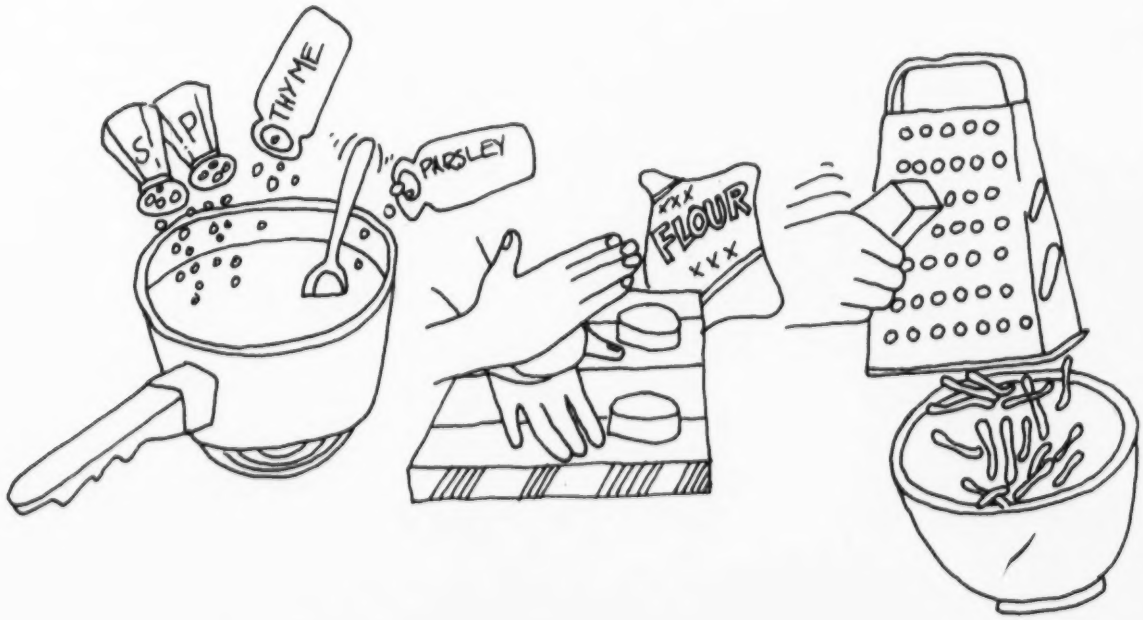
Get help. Running a daily cooking programme with young children can be extremely frustrating if you've never cooked with kids before especially if you're the only adult with a group of 25 or more children. Get help from older kids in the school, from parents and from anyone else in the community who shows an interest. Either co-ordinate the programme yourself, or get another teacher, classroom assistant or parent to do so — this person should be someone free to be in the classroom every day.

Plan. Plan ahead for future cooking activities. Obtain utensils and ingredients beforehand to avoid disappointments.

Kids can help. If you're the teacher and another person is co-ordinating the cooking programme, try to spend a little time together at the end of the day talking about the next cooking activity — consider the various jobs that will be involved — e.g. sifting the flour, beating the eggs, mixing the milk powder, and so on, and talk about the different learnings and discoveries you can help children make while doing these things. Also, gather any pictures, stories, songs, etc. you might use while preparing that food. This preparation needn't take long, but it will make a lot of difference to the cooking activities.

Remember to let the children do as much of the cooking as they possibly can. The adult is there for safety reasons and to extend the children's learning by listening to them, talking to them and helping where necessary, but **not** to do everything for them.

Don't rush slow eaters. Arrange your programme so that, when children finish eating, they go to a quiet activity of their own choice. This will take the pressure off slow eaters to hurry or not finish their food.



SAFETY AND HYGIENE

Safety and hygiene are very important aspects of any cooking programme. When working with young children, any rules for safety and hygiene that you make should be continually enforced. Try to make these rules positive whenever you can.

Some suggestions:

Safety

Walk in the cooking area.

Keep areas around stoves and sinks clear.

Tie back long hair.

Turn up long sleeves.

Wipe up spills at once.

Keep floor clear.

Close cupboards and drawers.

Avoid piling all dishes into washing up bowl.

Wash dishes one at a time.

Take care when washing up knives and glasses.

Make sure hands are dry when using electrical outlets.

Turn all pan handles to the centre of the stove.

Use pot holders when handling hot pots and pans.

If you break glass, sweep it up and use a dust pan. Wrap it in paper before putting it in the garbage can. Use wads of wet paper to pick up small pieces of glass.

Establish clearly the rules and responsibility for handling fire hazards e.g. burning candles, matches, picnic fires.

Don't put water in hot fat or hot fat in water.

Keep sand, earth or baking soda nearby to douse any flames.

Use a proper step-stool or strong wooden box to reach high shelves.

Hygiene

Buy and store food in clean places.

Always wash hands before handling/eating food.

Tie back hair when preparing food.

Use clean aprons and towels.

Don't cough or sneeze over food.

Use clean, hot water and soap for washing up. (Show children how to rinse and wring out dish cloths).

Hang up dish cloths and towels to dry.

Wash and dry everything you use. (If preferred, dishes can be air-dried after rinsing.)

Cover all left-over food. Store in a cool place if necessary.

Keep tables and floor clean.

Brush teeth after eating.

Check with parents about any known allergies children might have.

Some food colourings have been attacked as health hazards. Use those that are of safe, vegetable origin. Check the labels and consumer literature. Whenever possible, use a natural source like berries, strong tea or coffee, onion skins, grape juice. Experiment!

Every opportunity should be taken to show the relationship between disease and food — disease resulting from not eating enough good food, from preparing food in unsanitary places, from not washing hands before handling food, from not storing food properly or from contamination with human or animal waste.

Involve the Public Health Agencies (nurses, etc.) as much as possible so that children understand the use of hygienic practices in daily life. This is especially important where it is difficult to get enough water for usual household purposes, or if there are likely to be risks of contamination of public water supplies.

WHERE DOES THE MONEY COME FROM?

1. Out of the school budget. Food and utensils should be seen as teaching materials just as pencils, crayons and paper are. Plan and estimate the amount required.
2. Donations from community, game management, local stores.
3. Use food brought back by older students from school hunting trips.
4. Children and parents may be ready to contribute on a regular or occasional basis to assist a worthwhile cooking program. Discuss this with your principal and local education authority.
5. Bake sales, proceeds from which can go towards buying more cooking supplies.